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43. (Amended) [A] The isolated polynucleotide of claim 39 [which encodes] encoding a fusion polypeptide, wherein the first polynucleotide sequence encodes part of the fusion polypeptide [and which includes the isolated polynucleotide segment of claim 39].

REMARKS

This Amendment is responsive to the Office Action mailed December 16, 1999 (Paper No. 8), which action was made final. Entry of this Amendment and reconsideration of the subject application in view thereof are respectfully requested.

Claims

Claims 18-43 were pending. Claims 18-43 stand rejected.

Claims 22, 26, 30, 35, 39 and 43 have been amended to more particularly and distinctly define the invention.

It is believed that entry of this Amendment will not require payment of any additional claim fees. Notwithstanding, Applicants hereby authorize the Commissioner to charge any additional claim fees required by entry of this Amendment to Deposit Account No. 50-0258.

Support

Support for the amendments to the claims is apparent. No new matter is added.

Sequence Listing

A substitute sequence listing is being submitted concurrently herewith, which substitute sequence listing is in compliance with the revised Sequences Rules. The concurrently filed paper copy of the Substitute Sequence Listing and Computer Readable Form are the same. No new matter is added.

Claim Rejections under 35 U.S.C. § 112, Second Paragraph

Claims 22-25 and 35-38 stand rejected under 35 U.S.C. § 112, second paragraph, as indefinite. Specifically, the Examiner asserts that

- (a) The recitation of “consisting of an amino acid sequence of SEQ ID NO” (claims 22 and 35) is vague and indefinite because it is not clear whether the nucleic acids mentioned in the claims encode the entire amino acid sequences referred to in the claims or only a small part of each of the amino acid sequences mentioned in the claims.

Without conceding the validity of this rejection, Applicants have elected to present the invention in different terms, which terms obviate the asserted basis for this rejection. Reconsideration and withdrawal of this rejection are respectfully requested.

Claim Rejections under 35 U.S.C. § 112, First Paragraph

Claims 18-43 stand rejected under 35 U.S.C. § 112, first paragraph, as non-enabled. Specifically, the Examiner asserts that

[o]ne of skill in the art would not be able to make and/or use the claimed invention for the following reasons.

- (a) The instant application does not teach those of skill in the art how to isolate any of the polypeptides mentioned in the claims. It is well known that polypeptide extraction and isolation are empirical in nature (see Critical Synergy: The Biotechnology Industry and Intellectual Property Protection, BIO (October 17, 1994). Thus, the application does not enable those of skill in the art to isolate any of the polypeptides mentioned in the claims. As the isolation of the polypeptides is not enabled, so too the use of any polynucleotide that encodes any of the polypeptides is not enabled. Likewise, the instant application does not teach how to use the vectors and host cells that contain the polynucleotides that encode the polypeptides mentioned in the claims.

Applicants respectfully disagree. Given the specific polynucleotide and polypeptide sequences disclosed in the specification, one skilled in the art would be able to practice the invention as claimed. In support of this rejection, the Examiner relies on the teachings presented in Critical

Synergy: The Biotechnology Industry and Intellectual Property Protection, BIO (October 17, 1994))(hereinafter "Critical Synergy"). The Examiner's reliance on Critical Synergy, however, is misplaced. Specifically, the teachings in Critical Synergy relied on by the Examiner deal with the uncertainty involved in the process of taking **a suspect protein on a gel through isolation, purification and sequencing**. See Critical Synergy, page 103, which provides in relevant part:

A suspect protein on a gel is not reliable for the purpose of obtaining nucleic acid sequence, first of all in the uncertainty of whether the particular visible protein is, in fact the suspected protein. The skilled artisan recognizes that the active protein in a sample may not be the predominant protein of the sample, and may not even be visible on such a gel. It may be present as a slight band easily missed or discounted, while a contaminant protein may be the only protein present in sufficient amounts as to be visible as a band. The skilled artisan is also cognizant of the fact that two or more similarly sized proteins may run to the same location on a gel, thus appearing as a single protein.

The murC polynucleotide of the subject invention has already been isolated and sequenced by the Applicants. The results of this isolation and sequencing form a foundation of the claimed invention. It is the specific polynucleotide and polypeptide sequences disclosed in the specification that enable those skilled in the art to practice the claimed invention. The Examiner appears to be inappropriately requiring Applicants to have described in their specification how they arrived at their invention. Such is not a requirement of the law. Still further, as to the protein-directed claims, the discussion in Critical Synergy is not relevant. The specific gene involved in the claimed invention is already known, has been sequenced and is taught in the specification. Hence, one skilled in the art practicing the claimed invention is not faced with the technical hurdles described in Critical Synergy which are associated with the **gene discovery** process. Reconsideration and withdrawal of this rejection are respectfully requested.

Claim Rejections under 35 U.S.C. § 102

Claims 22-24 and 35-37 stand rejected under 35 U.S.C. § 102(a) or (b) as anticipated by EP 786,519 (Kunsch et al.) or Varon et al (Mol. Microbiol. 20: 339 (1996)). Specifically, the Examiner asserts that

[t]he reference discloses DNAs that encode portions of sequences contained in SEQ ID Nos 2 and 4 and thus meet the claims. Since

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sequences were determined in each of the references, the DNAs of the references were necessarily contained in cloning vectors and host cells.

Without conceding the validity of this rejection, Applicants have elected to present the invention in different terms, which terms obviate the asserted basis for this rejection. Reconsideration and withdrawal of this rejection are respectfully requested.

Closing Remarks

Applicants thank the Examiner for the Office Action and believe this response to be a full and complete response to such Office Action. Accordingly, favorable reexamination, reconsideration in view of this response and allowance of the pending claims are earnestly solicited.

FEE DEFICIENCY

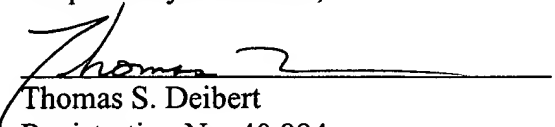
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DECHERT PRICE & RHOADS
Princeton Pike Corporate Center
PO Box 5218
Princeton, New Jersey 08543-5218
Fax: (609) 620-3259
Attn: Allen Bloom, Esq.
(609) 620-3214
Thomas S. Deibert, Esq.
(609) 620-3231

Respectfully submitted,


Thomas S. Deibert
Registration No. 40,984
for
Allen Bloom
Registration No. 29,135
Attorney for Applicants